of injuries. Retention-tumors may, however, be caused by injury or compression of the excretory duct (concretions).

57. Experiments on animals prove that lesion of the gland-tissue alone may heal readily.

58. Low position of the stomach and certain positions of the body allow the pancreas to approach the anterior belly-wall and in wounds of these parts give occasion to prolapse of the gland.

59. Discharge of pancreatic fluid from the wound has not been observed after shot injuries, though once after a stab.

60. Scattered cases of cure have been described for all groups of injuries. Cut-stab wounds, after removal of the prolapse heal readily in a few weeks.

61. Prognosis in pancreatic injuries simply is not less favorable than in those of the glands.

IV.—Kidney Injuries.

61. The injuries of these organs fall into two chief groups quite separate in deportment, the extraperitoneal (complicated, uncomplicated) and the intraperitoneal.

63. Subcutaneous injuries arise more frequently from direct than from indirect force. Muscular contractions may also lead to organic lesion.

64. Cut-stab wounds of the kidney are rarely observed.

65. Of all the abdominal organs the kidneys give the most striking symptoms of injury. They may be be divided into primary and secondary.

To the former belong:

(*a*) Phenomena of shock (severe vomiting). This occurred more frequently and intensely than with the other organs.

(*b*) In extraperitoneal rupture perineal blood-extravasations form. Here the danger of bleeding to death is far less than when into the free abdominal cavity.

(*c*) Symptoms of general peritonitis are exceptional in extraperitoneal lesions, nearly constant in intraperitoneal.

(*d*) Local nephritic pain is constant and irradiated especially to the testicle (retraction); it accompanies in particular kidney colic from the blocking of the ureter by clots.

(*e*) Hæmaturia is a very frequent symptom (70%). and often relapsing. Other disturbances of exuresis (anuria, oliguria, dysuria) are closely connected with temporary blocking of the urine conductors by hæmorrhage.

To the secondary symptoms belong:

(*a*) Traumatic nephritis with albuminuria (casts), pyuria, abscess of the kidney and sympathetic nephritis of the non-injured kidney.

(*b*) Paraplegic symptoms, not to be regarded as reflex but as dependent, usually on parallel concussion of the cord or larger nerve trunks.

(*c*) In open kidney wounds the discharge of urine through the external wound (24.2%).

66. As to the healing of kidney injuries experimental observations give results analogous to those from the other glands.

67. The clinical course is as follows:

IN SUBCUTANEOUS INJURIES.

(*a*) Uncomplicated injury of the kidney is far more frequent than of the other glands (53%).

(*b*) Traumatic nephritis is rare. When it does occur it leads to suppuration more readily than to recovery. Nephritic abscess usually has its seat in the cortical substance, and may give occasion to calculous formation or to obstinate kidney-fistula.

(*c*) Perineal extravasation of blood with or without admixture of urine leads to perinephritic abscess especially where there is occasion for decomposition. It may perforate spontaneously.

(*d*) Hydronephrosis has been observed a few times after lesion of an ureter.

(*e*) Of all cases one-half (50%) recovered; of the uncomplicated 24.2%; of the complicated 24.2%.

(*f*) The cure lasted on an average three to four weeks.

(*g*) Causes of death; size of injury and primary hæmorrhage 60%, peritonitis 11%, suppurative processes 7%, complications 15%.

(*h*) Rupture was usually transverse and crossed the whole organ.

In Shot Wounds.

(*a*) Uncomplicated shot-wounds of the kidney have a more favorable course than the analogous gland-injuries.

(*b*) Primary hæmorrhage, traumatic nephritis, intra- and extra-renal abscesses have rarely been described. Suppuration is usually limited to the immediate vicinity of the shot canal.

(*c*) Collective cures 56%; uncomplicated 85%; complicated 16.6%.

(*d*) Duration of cure, from the admixture of urine was very protracted—several months to three-quarters year.

(*e*) Death most frequently resulted from pyæmia, and cachexia from suppuration, peritonitis, and only in a few cases from hæmorrhage.

(*f*) Here also encapsulation of foreign bodies has been observed.

In Cut and Stab Wounds.

(*a*) Collective cures 58.3%; uncomplicated 85.8%; complicated 0.0.

(*b*) Average length of cure was one month. Prolapse of the kidney healed uninterruptedly after removal.

68. The mortality from all kidney injuries was 47.3%—$16^1/_2$% lower than the average mortality from all the glands. Mortality from extraperitoneal 30.4%, from intraperitoneal 80%.

69. Prognosis.

(*a*) About one in three of the subcutaneous extraperitoneal injuries and one in four of the shot wounds terminated fatally; cut-stab wounds are more favorable still.

(*b*) In intraperitoneal injuries the prognosis is very bad, that of the open even less favorable than that of the subcutaneous, and worse than that of the abdominal glands, though still not absolutely fatal.

(*c*) In subcutaneous injuries primary hæmorrhage is the most frequent cause of death; in open wounds peritonitic and suppurative processes.

70. The mechanical-medicinal treatment is symptomatic.

71. For operative procedures nephrotomy or nephrectomy may be necessary.

72. The indications for the former are local stasis of primary or secondary hæmorrhage, or the earliest possible relief of dangerous suppuration.

73. Indications for nephrectomy are:

(*a*) In subcutaneous injuries where the patient is bleeding to death.

(*b*) Always in severe suppuration where nephrotomy does not suffice.

(*c*) A prolapsed kidney that is irreducible or pathologically changed.

74. Contraindications:

(*a*) Congenital defect of the other kidney or anomalies like horseshoe kidney.

(*b*) Cohesion or sympathetic disease of the other kidney.—*Arch. f. klin. Chirg.*, 1887, Bd. 34, hft. iv.

GENERAL SURGERY.

I. Surgical Diseases which Man has Acquired by Changing to the Upright Position. By Dr. ALBRECHT (Hamburg). The tendency to pass to the two-legged attitude is present in nearly all mammalia. In man it is most thoroughly carried out. The altered body carriage may be the cause of various morbid processes.

(1). Bone diseases, resp. troubles resulting therefrom; pathological skolioses—emphasized normal forms—spondylitis, cold sinking abscesses, coxitis, genua vara and valga, spondylolisthesis.

(2). Migration of poorly attached retroperitoneal organs, viz., kidneys, ovaries and especially testicles.

(3). Hernia, of hypogastric region in the widest sense.

(4). Varices, varicoceles, hæmorrhoids.

(5). The so-called pulsion-diverticula of the œsophagus. The retropharyngeal pockets he finds lie in the position of the cœcum œsophageum of various mammalia. In quadripeds food-particles can be more easily regurgitated therefrom. His theoretical considerations cannot be conveniently reproduced.—Rept. of XVI Germ. Surg. Congress in *Cent. f. Chirg*, 1887, No. 25.

II. On Artificial Respiration and Artificial Heart-Motion. By Prof. KRASKE (Freiburg). In a child, æt. 5 years, strangulated 12 to 15 min. by croup, tracheotomy was performed and artificial respiration (Sylvester) begun. In a few minutes the lips became red, the cheeks soon also, and the pupils narrowed. On stopping respiration all this subsided but reappeared on renewal of efforts. Life did not